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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/557,262	04/24/2000	Robert D. Rosenberg	MIT-087	8522

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TESTA, HURWITZ & THIBEAULT, LLP
HIGH STREET TOWER
125 HIGH STREET
BOSTON, MA 02110

EXAMINER

SHUKLA, RAM R

ART UNIT	PAPER NUMBER
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1632

DATE MAILED: 03/11/2003

17

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/557,262

Applicant(s)

ROSENBERG ET AL.

Examiner

Ram R. Shukla

Art Unit

1632

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 30 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 61-91 is/are pending in the application.
- 4a) Of the above claim(s) 81 and 89 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 61-80, 82-88, 90 and 91 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Response and amendment filed 12-30-02 has been received.
2. Claims 1-12 and 29-32 have been cancelled.
3. Claims 61-76 have been amended and new claims 77-91 have been entered.
4. Claims 61-91 are pending in the instant application.
5. In response to applicants' request a telephonic interview was conducted with Ms. Diana Steel on 3-5-03. Various enablement and art related issues were discussed and suggestions were made to applicant regarding allowable subject matter.

Oath/Declaration

6. The new oath or declaration has been entered.

Election/Restrictions

7. Newly submitted claim 81 and 89 have been directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: these claims recites 27 new nucleic acid species that were not examined in the previous office action and that will represent distinct species with different sequence structure, will hybridize to different DNA and will encode polypeptide that will have different amino acid structure and function. It is noted that five different species examined in the previous office actions and the newly presented species are distinct from these species.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claim 81 and 89 have been withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

8. Claims 61-80, 82-88, 90 and 91 pertaining to human and murine 3-OST-1 are instantly under investigation.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

10. Claims 61-80, 82-88, 90 and 91 remain rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for: (i) an isolated nucleic acid that encodes a human or mouse 3-OST-1 protein, wherein said isolated nucleic acid comprises the nucleotide sequence of SEQ ID NO 1 or SEQ ID NO 3 and wherein said isolated nucleic acid encodes the protein disclosed in SEQ ID NO 2 and SEQ ID NO 4 respectively (ii) an isolated nucleic acid that encodes a 3-O-sulfotransferase domain of the human or mouse 3-OST-1 protein wherein the domain consists of residue 53-311 or 21-307 of SEQ ID NO 2 or residue 49-307 or 21-303 of SEQ ID NO 4 and wherein said human or mouse 3-OST-1 protein has sequence specific HS-binding activity and (iii) an isolated host cell selected from the group consisting of: bacterial cells, yeast cells, insect cells, and mammalian cells, wherein the mammalian cells are selected from the group consisting of: COS-7 cells, CHO, murine primary cardiac microvasculature endothelial cells, murine mast cell line C57.1, human primary endothelial cells or umbilical vein, F9 embryonal carcinoma cells, rat fat pad endothelial cells, and L cells, wherein the isolated host cell comprises the nucleic acid, does not reasonably provide enablement for any other embodiments encompassed by the claimed invention, for reasons of record set forth in the previous office actions of 11-8-01 and 7-30-02. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

It is noted that applicants have modified claim 61 by reciting a fragment of SEQ ID NO 1 and substitutions or variants thereof and that the substitutions or

variants encode a polypeptide with 3-O-sulfotransferase activity. This amendment has, in place of addressing the enablement issues raised in the previous office action, further broadened the scope of the claimed invention and as discussed in detail in the office action of 11-8-01.

Response to Arguments

Applicant's arguments filed 12-30-02 have been fully considered but they are not persuasive. It is noted that applicants have not provided any arguments to address the scientific issues raised in the previous office actions rather have listed parts of specification. However, these sections of the specification do not address the enablement issues raised in the previous office actions.

11. The nucleic acid sequences of SEQ ID NO 1 and 3 and those encoding the amino acid sequences of SEQ ID NO 2 and 4 are free of the prior art of record.

12. No claim is allowed.

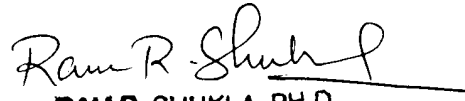
THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 1632

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ram R. Shukla whose telephone number is (703) 305-1677. The examiner can normally be reached on Monday through Friday from 7:30 am to 4:00 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Reynolds, can be reached on (703) 305-4051. The fax phone number for this Group is (703) 308-4242. Any inquiry of a general nature, formal matters or relating to the status of this application or proceeding should be directed to the William Phillips whose telephone number is (703) 305-3413.

Ram R. Shukla, Ph.D.
Primary Examiner
Art Unit 1632


RAM R. SHUKLA, PH.D.
PATENT EXAMINER